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1. Your reference KKP/8124

2. Patent application number *(The Patent Office will fill in this part)* 0212614.2

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P01/7700 0.00-0212614.2

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

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Patents ADP number *(if you know it)* 8394983001

If the applicant is a corporate body, give the country/state of its incorporation

4. Title of the invention

Applicator

5. Name of your agent *(if you have one)*

Swindell & Pearson

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*

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Derby DE1 1GY

Patents ADP number *(if you know it)* 00001578001

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Country	Priority application number *(if you know it)*	Date of filing *(day / month / year)*

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11. I/We request the grant of a patent on the basis of this application.

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Swindell & Pearson

12. Name and daytime telephone number of person to contact in the United Kingdom Mr. K. Parnham (01332) 367051

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Applicator

The present invention relates to applicators and particularly but not exclusively an applicator for applying paint to a surface.

Tools suitable for applying paint to a surface are well known and include brushes, rollers, paint pads etc. Normally, these require the separate provision of a paint container with the paint loaded from the container onto the tool. Loading is by dipping an end of the tool into the container and wiping off the excess. More recently pressurised paint containers have been used to supply paint to the tool. Both approaches suffer a number of disadvantages. They can be cumbersome to use. Pressured paint containers or pumping requires the container to be remote from the tool as it would make the tool too heavy to handle. Thus, flexible piping must be used and this impedes the movement of the operator. Achieving a controllable flow of paint to the tool may be problematic since the viscosity of paint may vary considerably. The extensive clean down of equipment after painting is finished can be off putting to users, and may often mean that such systems are only used by professionals or by users painting large surface areas. The pressure in such systems can vary resulting in a variable flow of paint to the tool.

According to the present invention, there is provided an applicator for applying paint to a surface, the applicator including a body for paint, paint distribution means to distribute paint in use onto a surface by contact with that surface, the body including paint biasing means to bias, in use, the paint toward the distribution means, an operator in use holding the tool by the body and operating control means for control of the bias means and so the flow of paint to the paint distribution means.

Preferably the paint distribution means is releasably engageable with the body and forms a separable applicator head. The paint distribution means may include a brush, a pad, or a roller. The head may include mounting means for rotatably mounting a roller with a roller surface which in use contacts the surface to be painted. The head may include a hood which partially encloses

the roller.

Possibly, the head includes flow regulation means to regulate the flow of paint to the roller surface in association with the bias means. The flow regulation means may include a gap defined between a distribution means surface and the hood. Preferably the head includes at least one passage defined in the hood and normally a plurality of passages therein. Preferably the passages are arranged in a row running parallel with the axis of the distribution means surface. Preferably the row of passages extends substantially the width of the surface. Alternatively the row is shorter in length than the width of the surface, and each end of the row is not less than 25mm from the corresponding end of the surface. Preferably the gap is at a minimum at or adjacent to the or each passage. Normally, the distribution means surface is a roller surface.

Preferably the hood includes a concave internal surface. Normally, the hood will have a different radius to the roller surface. Typically, the hood will be of larger radius than the surface. Possibly the roller surface and hood surface are not concentric. Advantageously, the roller surface and hood surface will diverge away from each other about the passages.

The head may include a recess defined in the hood, and the or each passage may lead to the recess. Possibly, the recess forms a plenum chamber. Preferably, the recess extends substantially the width of the distribution means surface. Advantageously, each end of the recess is not less than 18mm from the corresponding end of the distribution means surface. Edges may be defined where the recess meets the internal hood surface, and the gap may be at a minimum at the edges. The distribution means surface may contact the edges. Elongate projections may be provided along the edges parallel to the roll axis of the roller, and the projections may be rounded in form.

Preferably the mounting means for the roller are adjustable, so that the minimum gap is adjustable. The mounting means preferably allows the roller to be removed from the head.

The distribution means surface may include textures or patterns to facilitate paint distribution on the surface to be painted.

In one embodiment, the body may include holding means for a paint container.

Possibly the paint container is removable.

In another embodiment, the body includes refilling means. The refilling means may comprise a threaded end cap.

Preferably the paint biasing means includes a plunger, which may be movable to act on the paint in the body or the paint container such that as the plunger advances, the bias on the paint forces flow to the paint distribution means.

Preferably the plunger includes rod means, which extends away substantially along the longitudinal axis of the body from a plunger head acting upon the paint. Preferably, the body includes gripping means having a handle in the form of a tube having a passage therethrough. Preferably the rod means extends into and along the handle. Preferably, the rod means extends beyond the handle and may include a gripping portion at its distal end by which the plunger may be moved. The gripping portion may include a lateral extension, extending laterally beyond the handle. The lateral extension may form a base on which the tool may be supported, and may include a planar surface perpendicular to the longitudinal axis of the body.

The rod means may comprise a rod extending from the plunger head and a gripping member telescopically mounted within the handle and slidably engaged with the rod. The gripping portion may be mounted on the gripping member. Preferably the gripping member is biased to a retracted position.

Preferably the control means includes a trigger mounted on or adjacent to the handle. The handle may include a linkage operable by the trigger to

advance the plunger. The linkage may comprise a link plate having an oversized aperture through which the rod passes. The link plate may be biased towards the trigger and, in a relaxed condition, out of engagement with the plunger, so that as the trigger is operated the link plate is brought into engagement with the plunger, further operation of the trigger moving the link plate towards the paint in the body or container and causing the plunger to advance to bias the paint towards the distribution means.

Preferably the tool includes connection means interposed between the applicator head and the body. The connection means may be articulated to allow the angle of the paint distribution means to be varied relative to the longitudinal axis of the body.

Preferably the paint container is formed of translucent or transparent material, or may include a window of translucent or transparent material, to provide a visual indication of the amount of paint in the container.

According to the present invention, there is provided a method of applying paint to a surface, the method comprising the use of an applicator as described previously, the method comprising providing paint to the applicator, holding the body, providing bias to the paint to drive that paint towards the distribution means and operating the control means to control a flow of paint to the paint distribution means, while moving the tool so that the paint distribution means contact and move across a surface to be painted.

Preferably, the paint is provided by installation of pre-filled cartridges. Alternatively the method includes providing the paint by filling the body or paint container by unscrewing the end cap, pouring in paint, and replacing the end cap.

In a further alternative method, the body or container may be filled by providing paint in flexible pre-filled sachets or bags, the bags sized to fit in the container, the bags being placed in the open container, punctured, and the end cap being replaced. Typically, the puncturing will be just prior to installation or

during provision of the bias applied to the paint towards the paint distribution means.

Alternatively in accordance with the present invention, there is provided pouring apparatus for a paint can, the apparatus including a pouring member having an engaging means engageable in use with a portion of the rim of a paint can, the pouring member including a concave pouring surface, the pouring member arranged so that when in engagement with a paint can it has an upright position and the pouring surface directs any paint on the surface to run onto the surface of the paint in the can at a displaced position from the side of the can.

Preferably the pouring surface extends upwardly in use to an apex. Preferably the engaging means encloses a portion of the rim of the can.

Preferably the pouring member and engaging means are formed integrally, and may be of a resilient flexible material.

Still further according to the present invention, there is provided a method of filling a paint container, the method including filling the paint container from a can using pouring apparatus as described previously, the pouring apparatus being sized to direct paint during pouring into the paint container.

Possibly, the paint container is the body of an applicator as described above.

Embodiments of the present invention will now be described, by way of example only with reference to the accompanying drawings in which:-

Fig. 1 is a diagrammatic cross-sectional view of an applicator according to the invention;

Fig. 2 is a side view of a head of the applicator depicted in Fig. 1;

Fig. 3 is a view on a cross-section from the line III-III of Fig. 2 showing the head on the right with a roller in position and on the left with the roller removed;

Fig. 4 is a similar view to Fig. 1 of an alternative embodiment of an applicator according to the present invention;

Fig. 5 is a side view of the applicator depicted in Fig. 4;

Fig. 6 is a view on a cross-section from the line VI-VI of Fig. 5 showing the head on the right with a roller in position and on the left with the roller removed;

Figs. 7a and 7b, are diagrammatic sectional views of alternative paint distribution means;

Fig. 8 is a diagrammatic section view of an alternative end cap;

Fig. 9 is a diagrammatic section view of a connection means;

Fig. 10 is a section view of a detail of an alternative trigger arrangement;

Fig. 11 is a perspective view of pouring apparatus according to the invention in use on a paint can; and

Fig. 12 is a section view detail of an engaging means of the pouring apparatus in engagement with a rim of a paint can.

Fig. 1 shows a side view of an embodiment of the present invention. An applicator includes a body 10 in engagement with an applicator head 12. The body 10 includes a cylindrical wall 14. One end of the cylindrical wall 14 is closed by an end cap 11. The end cap 11 extends outwardly to allow the body to be gripped. The body 10 includes a handle tube 22 having a passage 24 therethrough. The head 12 includes a head end cap 13 in threaded engagement

with the other end of the cylindrical wall 14. The body 10 includes paint biasing means in the form of a plunger 18 having a head 19 and a rod 20 operated by a trigger 40 pivotally mounted on end cap 11 by pivot 42. The plunger head 19 is movable within the cylindrical wall 14 and the rod 20 extends substantially along the longitudinal axis of the body 10, through the handle end cap 11 and into the handle passage 24. The space within the cylindrical wall 14 between the plunger head 19 and the end cap 13 defines a paint containing compartment 16.

The rod 20 includes a stop means in the form of a nut 26 at its distal end. A gripping member 34 is slidably mounted on the rod 20 within the passage 24, the gripping member 34 being in the form of a tube having a partially closed end 36, the partially closed end 36 defining an aperture through which the rod 20 is movable. The nut 26 is located on the distal side of the closed end 36 and is larger in diameter than the aperture in the end 36. The gripping member 34 is telescopically mounted within the handle passage 24. The gripping member extends outwardly beyond the handle 22 to form a gripping portion 30 including a lateral extension 32 which extends laterally beyond the handle 22. The lateral extension 32 has a planar surface 38 perpendicular to the longitudinal axis, forming a base on which the tool may stand upright.

The paint biasing means includes control means including the aforesaid trigger 40, and a linkage operable by the trigger 40 to advance the plunger 18. The linkage is in the form of a link plate 48 defining an oversized aperture through which the plunger rod 20 passes. The link plate 48 is located in a compartment of the handle 22 defined by the handle passage 24, a passage wall 44 and the handle end cap 11. A compression spring 46 biases the link plate 48 out of engagement with the plunger rod 20 and against a projection 52 extending from the trigger 40.

The head 12 includes paint distribution means in the form of a roller 72 having a roller surface 74. The head 12 includes a hood 70 extending from the end cap 13. Conduits are provided from the paint containing compartment 16

to the roller surface 74 in the form of a plurality of passages 60. As seen on the left of Fig. 3, the passages 60 are arranged in a row running parallel with the roller axis. Typically, the row is narrower than the width of the roller surface 74 with the ends being not less than 25mm from the corresponding end of the roller surface. Thus, the passages 60 adequately distribute paint to the roller 72.

As shown in Fig. 2, the head 12 includes a hood 70 includes side plates 78 rotatably mounting the roller 72. The hood 70 has a concave internal surface 76 of larger radius than the roller surface 74. The surfaces 74 and 76 are not concentric, and flow regulation means are provided in the form of a gap 66 defined between the concave internal surface 76 of the hood and the roller surface 74 about the passages 60. Regulation is provided by the narrowness of the gap 66 in relation to the viscosity of the paint and roller displacement under compression in contact with the surface to be painted.

The passages 60 open into a recess 62 defined in the internal surface 76 of the hood 70. Again as seen on the left of Fig. 3, the recess 62 is narrower than the width of the roller surface 74 with each end being not less than 18mm from the corresponding end of the roller surface 74. Edges 64 are defined where the recess 62 meets the hood internal surface 76, and the roller 72 is mounted such that the gap 66 is at a minimum at the recess edges 64 for regulation of the rate and/or volume of paint presented to the roller 72.

Figs. 2 and 3 show the roller mounting means. The hood 70 includes spaced opposed side plates 78 between which the roller 72 is mounted between apertures 98 in each plate 78. A stub axle pin 80 extends through each aperture 98 into the roller 72. The pin 80 has a head 82 provided with a slot 84 allowing rotational adjustment with a tool such as a screwdriver. The pin 80 has a body 96 including a circumferential slot 84 engageable with a removable slotted plate 86. The slot 84 is located in use on the inside of the hood side plate 78. The body of the pin 96 defines a longitudinal axis 92. The pin body 96 extends inwardly to an off-set portion 90 having an axis 94. The roller 72 is mounted on the off-set portion 90.

An applicator in accordance with the present invention may be filled with paint by unscrewing head end cap 13 from the cylindrical wall 14. The plunger head 19 is moved away from the applicator head 12 to abut against the handle end cap 11 by the operator gripping the gripping portion 32 and moving the gripping portion 32 away from the head 12. The gripping portion 32 moves until the partially closed end 36 of the gripping member 34 engages the end nut 26 of the rod 20. The operator continues to move the gripping portion 30 away from the head 12 and the plunger 18 is moved until stopped by the end cap 11. The compartment 16 is then filled with paint and the end cap 13 replaced. Conveniently, the tool may be stood upright during filling on the base formed by the planar surface 38.

In use, the applicator and in particular the roller surface 74 is placed against a surface to be painted. The operator, holding the tool by the handle 22, moves the trigger 40 towards the handle 22. The trigger 40 rotates on the pivot 42, moving trigger projection 52 and engaging link plate 48, which rotates into engagement with rod 20. Further movement of the trigger 40 moves the link plate 48 and hence the rod 20 in the direction of the head 12 and against the bias of the spring 46. At the end of its travel, when the trigger 40 is against the handle 22, the operator releases the trigger. The spring 46 biases the link plate and the trigger away from the head 12. This moves the link plate 48 out of engagement with the rod 20 to abut against the passage wall 44. Operation of the trigger 40 is then repeated, advancing the rod 20 and hence the plunger 18 along the paint containing compartment 16 in order to maintain the bias force applied to the paint. As the plunger 18 advances, paint is forcibly driven from the compartment 16 into the passage 60, the recess 62 and onto the roller surface 74. The plurality of passages 60 ensures that the paint is distributed across the width of the roller 72. The recess 62 acts as a plenum chamber to improve and facilitate distribution of the paint to the roller surface 74. The relatively low viscosity of paint and the thixotropic nature of thicker paint means that control of the paint flow is readily achieved by repeated operation of the trigger 40 when necessary to maintain flow.

Further regulation of the paint flow to the roller 72 is achieved by

adjusting the gap 66 between the roller surface 74 and the internal surface 76 of the hood, and in particular the edges 64 of the recess 62. The distance of the roller surface 74 from the hood 70 may be adjusted by rotationally adjusting the axle pin 82. The axle pin 82 is rotated by means of a screwdriver inserted in the slots 84, the off-set portion of the pin 90 on which the roller 72 is mounted rotates around the pin axis 92 in order to displace the roller surface 74 relative to the hood internal surface 76.

The features of the gap 66 being minimised at the edges 64 of the recess 62, the radius of curvature of the hood internal surface 76 being greater than the radius of curvature of the roller surface 74, the two surfaces not being concentric and the adjustability of the gap 66 allow the provision of an even and well distributed transfer of paint to the roller surface 74 without paint running along the concave hood internal surface 76 and subsequent messy dripping from the edge of the hood. The roller 72 is adjusted until the roller surface 74 is, in fact, just contacting the recess edges 64 so that a slight frictional resistance to the rotation of the roller 72 can be felt. As the trigger 40 is operated and paint flows, the contact between the recess edges 64 and the roller surface 74 prevents leakage of the paint but allows a controlled amount of paint onto the roller surface 74. The effect of the widening gap 66, the surface tension of the paint, and the moving surface of the roller 74 has the result that substantially all of the paint is carried from the recess edge 64 by the surface of the roller 74, rather than dribbling round the internal surface of the hood 76. Control of paint pressure is possible by the manual operation of the paint biasing means, and the specific control of the distance between the roller surface 74 and the recess edges 64 is possible due to the adjustable roller mountings. Thus, varying paint loadings suitable for different surfaces and the use of paints of different viscosity are possible.

The relatively low viscosity of paint in comparison to, for instance, the mastic in a mastic gun means that the paint flows readily in response to movement of the trigger, and flow substantially ceases when movement of the trigger ceases. Once movement of the trigger has stopped, flow out of the passages 60 stops due to the relatively small diameter of the passages 60, the

surface tension of the paint, and the effect of atmospheric pressure, preventing leakage of the paint.

During painting operations, the plunger 18 will move along the paint containing compartment 16 until it reaches the head end cap 13, at which point the applicator can be refilled with paint in a similar manner to that described previously.

On completion of the painting operation, the head end cap 13 is removed from the wall 14 and any remaining paint in the compartment 16 emptied back into the original paint container. The trigger 40 is then operated to move the plunger 18 along the compartment 16. The close fit of the plunger head 19 to the wall 14 effectively wipes the internal wall surfaces substantially clean of any paint and when the plunger head 19 appears at the open end of compartment 16, the plunger head surface itself may be cleaned. The plunger head 19 may then be withdrawn as described above and the compartment 16 filled with a quantity of water or a suitable paint cleaning solvent. The head end cap 13 is then replaced and the trigger 40 operated to flush the solvent through the passages 60 and recess 62, cleaning the passages and recess. Thus, the tool can be rapidly cleaned without excessive waste of surplus paint.

The roller 72 is removable from the hood side plates 78 by simply moving the slotted plates 86 out of engagement with the grooves 88 of the pins 80. The pins 80 may then be withdrawn from the side plate 78 allowing the roller 72 to be removed from the hood 70.

Fig. 4 shows another embodiment of an applicator for applying paint to a surface, in which a pre-filled paint cartridge is utilised. Since the majority of features are the same as for the embodiment shown in Fig. 1, only those features which are different will be enumerated and described. The cartridge includes a cylindrical wall 114 having at one end a movable end wall 115 and at the other end a removable end cap (not shown) threadably engaged with the wall 114. In use, the removable end cap is removed and a head end cap 113 similar to the head end cap previously described is fitted to the cartridge wall

114. The one end of the cartridge is fitted into the handle end cap 111, the one end and the handle end cap being provided with threaded engagement means. The plunger 118 is movable within the cartridge to engage the movable end wall 115. Operation is similar to that described previously. As the trigger 40 is operated, the plunger 118 moves the end wall 115 to force paint from the cartridge compartment 116 through the passage 60 and recess 62 to the roller surface 74. When the end wall 115 has been moved along the compartment 116 to abut the end cap 113, the end cap 113 is removed, the cartridge is removed from the handle end cap 111 and the cartridge is discarded. The plunger 118 is then withdrawn by means of the gripping portion 30 and a new cartridge fitted to the tool. The use of pre-filled cartridges removes the need for the refilling operation and reduces the amount of cleaning required, both of which can be messy, inconvenient and time consuming operations.

Figs. 5 and 6 show an alternative adjustable roller mounting means. In this embodiment, the hood side plates 278 each include a slot 298 in which a mounting plate 279 is slidably movable. The mounting plate 279 defines a mounting plate aperture 281 through which a stud axle pin 280 passes, and on which roller 72 is mounted. Engagement means are provided between mounting plate 279 and the sides of the slot 298, the engagement means arranged so that the mounting plate 279 is a friction fit within the slot 298. The slot 298 is directed so that as the mounting plate 279 is moved, the roller 72 is moved towards or away from the recess edges 64, thus adjusting the gap 66. The engagement means includes engagement slots 284 in the sides of the mounting plate 279 abutting the sides of the slot 298, the said slot sides being receivable in the engagement slots 284. The stub axle pin 280 includes a thickened portion 281 which abuts an end of the roller 72 preventing longitudinal movement of the roller 72 along the pin axis. The thicker portion 281 also abuts the mounting plate 279 preventing disengagement of the pin 280 from the mounting plate 279.

In use, adjustment of the gap between the roller and the internal surface of the hood is accomplished simply by moving the mounting plates 279 within the hood side plates and slots 298. Likewise, the roller 72 is simply removed

from the hood 270 by withdrawing the mounting plates 279 from the side plate slots 298.

Fig. 8 shows an alternative head end cap 313 which may be used in place of the head end cap 13 previously described. The head end cap 313 includes a threaded spigot 314 having a passage 316 therethrough.

Figs. 7a and 7b show alternative paint distribution means, each having a threaded socket 318 engageable with the head end cap threaded spigot 314 and a passage 320 communicatable with passage 316 of the end cap 313. Fig. 7a shows a paint distribution means 321 including a sponge pad 322 having a piled surface 324. In Fig. 7b, the paint distribution means 325 includes a roller 326 having a piled roller surface 328. The roller of Fig. 7b is of smaller diameter and length in comparison to the roller shown in Figs. 1 - 5. In both cases, paint regulation can again be achieved through gap control, thixotropic effects etc.

In use the paint containing compartment 16 is filled as previously described and the head end cap 313 fitted to the wall 14 of the tool. The paint distribution means 321 or 325 of either Fig. 7a or Fig. 7b may then be fitted by threadably engaging socket 318 to spigot 314. As the trigger 40 is operated, paint is forced from the compartment 16 through the passages 316, 320 to the respective surface 324 or 328. Control of the flow is accomplished by means of the trigger operation.

Fig. 9 shows a connection 330 suitable for interposing between the head end cap 313 and the paint distribution means of Figs. 7a or 7b. Connection 330 includes a first connection member 332 having a threaded socket 342 engageable with the threaded spigot 314 of the end cap 313. A second connection member 334 is pivotally mounted to the first connection member 332 and includes a threaded socket 344 substantially the same as the threaded socket 314 of the end cap 313. First and second connection members 332 and 334 define a conduit or passage 336 through which a flexible pipe 338 passes. In use, the socket 342 of the first connection member 332 is fitted to the spigot

314 of the end cap 313, and the socket 318 of one of the paint distribution means 321 or 325 is fitted to the spigot 344 of the second connection member 334. The passage 316 of the head end cap 313 communicates with a pipe passage 340, which in turn communicates with the passage 320 of the paint distribution means. The pivoted connection means allows the paint distribution means to be used at an angle to the axis of the body of the tool which is particularly advantageous when painting in confined spaces or near to corners.

Fig. 10 shows an alternative trigger arrangement. The trigger 440 is formed integrally with the end cap 411 of a flexible and resilient material. Thus, the trigger 440 is resiliently movable relative to the end cap 411. The trigger 440 extends to form a pair of parallel, spaced projections 449, between which a plunger rod 420 passes. The projections 449 engage the link plate 448. Due to the resilient mounting of the trigger 440, the projections 449 bias the link plate 448 out of engagement with the plunger rod 420 and against passage wall 444. A further trigger projection 452 engages an end of the link plate 448. In use, the trigger 440 is moved towards the handle 422, simultaneously moving projections 449 away from link plate 448 and bringing trigger projection 452 into engagement with the end of link plate 448. Thus, the link plate 448 rotates into engagement with plunger rod 420. Further movement of the trigger 440 moves the link plate 448 and rod 420 in the direction of the head (not shown). The integral trigger and end cap arrangement of resilient flexible material reduces the number of components required, reducing complexity and cost.

Figs. 11 and 12 show pouring apparatus for a paint can, the apparatus including a pouring member 510 having a concave pouring surface 512 and extending at one end to an apex 514. At the other end, the pouring member includes engaging means engageable with a portion of the rim of a can 516. The engaging means, as shown in Fig. 12, includes a lip 518 extending laterally from the end of the pouring member 510. A projection 520 extends at first obliquely and then downwardly in use from the pouring member. At the end of the projections 520, a portion extends downwardly and parallel with the pouring member 512. The projection 520 and the lip 518 together form a recess 528 in which the rim of the paint can 516 is receivable. In use, the paint

can 516 is opened and the pouring member 512 fitted on the paint can 516. A portion of the rim 522 of the paint can 516 is thus received in the recess 528. The paint can may then be tilted to dispense paint over the pouring surface 512 and for example into the paint containing compartment 16 of the applicator as described previously. Any drips falling outwardly from the pouring member 512 will not foul the rim of the paint can since this is enclosed by the projection 520. When the paint can is set upright after pouring, any paint left on the pouring surface 512 will run back down the pouring surface onto the surface 526 of the paint in the can at a point away from the sides of the can. Likewise, brushes may be wiped on the pouring surface 512 of the pouring member. When painting has finished, the pouring apparatus may be disengaged from the rim of a can 516 and the lid of the can replaced. The pouring apparatus ensures a clean rim to receive the lid and overcomes the problem of dry, encrusted paint making lid removal difficult on subsequent occasions.

Various modifications may be made without departing from the scope of the invention. The embodiments of Figs. 1 and 4 essentially show a tool suitable for single handed use. However, an extension could be provided in or for the tool which then may be suitable for use with two hands. Such an extension may be convenient for decorating surfaces otherwise out of reach, for instance the upper surfaces of walls or ceilings. Other paint distribution means may be used, particularly, for instance a brush or a combination of a brush and a roller, and other methods of adjustably mounting the roller may be used. Alternative paint biasing means may be used. Alternative control means to those described may be used. In particular, the plunger may be other than hand powered, such as compressed air or gas. The trigger may be replaced by a release button or switch. Alternative types of pre-filled cartridge may be used, and in particular pre-filled sachets or bags placed in the paint containing compartment, punctured and the end cap replaced may be used. The pre-filled cartridge may be held in a different way to that described. For instance, the cartridge may be loosely held in position by a housing or frame.

The walls and in particular the paint containing compartment may be made of translucent or transparent material or may incorporate a window of

translucent or transparent material, providing a visual indicator of the amount of paint left in the paint containing compartment.

The flow regulation means may include a pair of elongate projections located at or adjacent to the edges of the recess and aligned parallel with the axis of the roller, and the projections may be rounded in form. The roller surface may be textured or include patterns. One or some of the passages 60 may be blocked to control or vary the distribution of paint to the roller to produce patterns of different effects on the surface to be painted. The passages 60 may be flared.

The gripping member 34 may be biased to a retracted position within the handle passage 24.

There is thus provided an applicator tool for applying paint to a surface having a number of advantageous features over conventional apparatus. The feature of the gripping means being in line with the axis of the body means that the applicator can be handled in the same way as a conventional painting tool such as a roller. The integral paint container means that the painting operation can be continuous without requiring an operator to stop and reload a brush or a roller. The paint biasing means provides a controllable flow of paint to the paint distribution means and may be controlled by the operator without lifting the paint distribution means from the surface being painted. The applicator may be easily adjusted to cater for paint of different viscosity and for use on different surfaces, and a variety of different paint distribution means may be used. The present applicator tool is an integral unit capable of independent use and operation.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

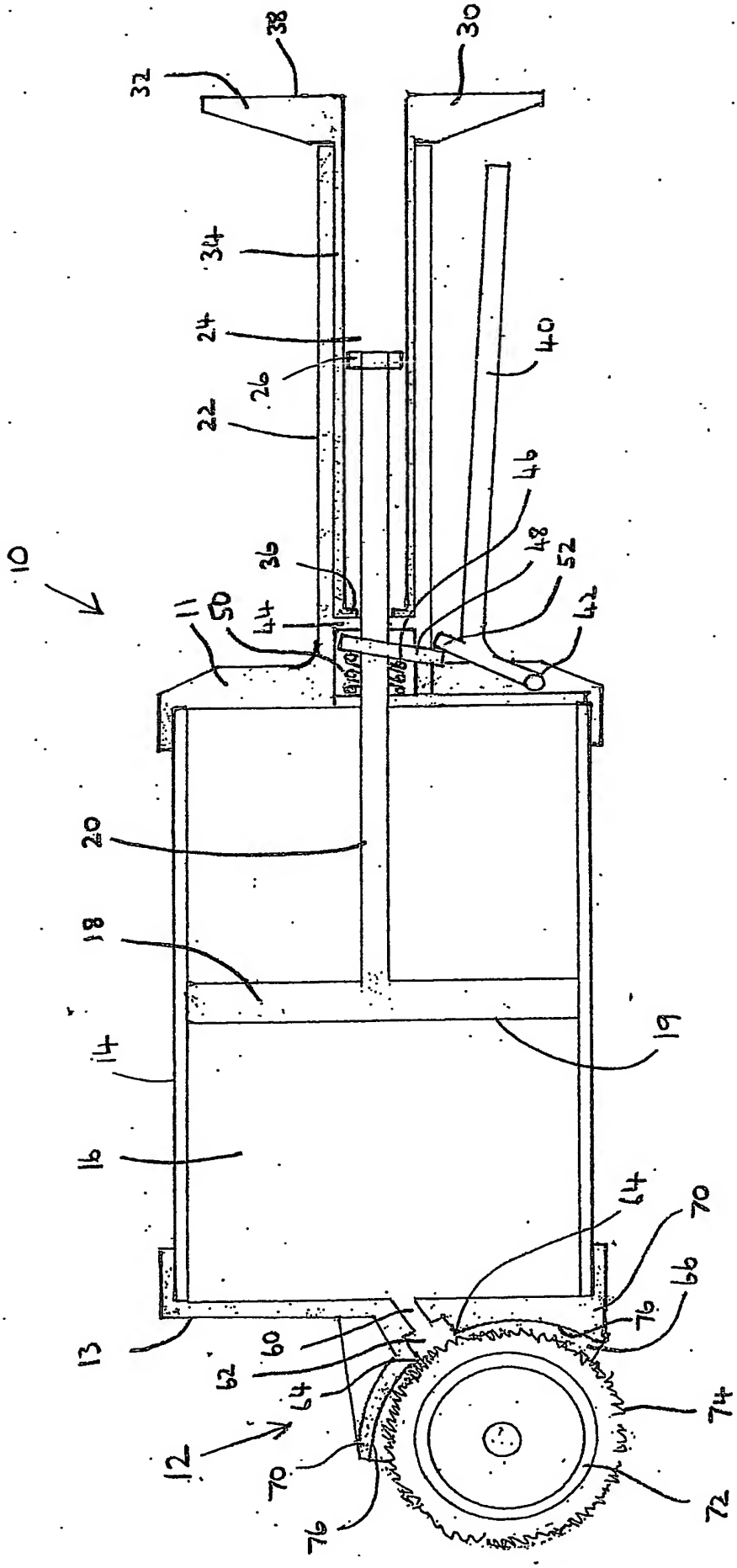
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FIG 1

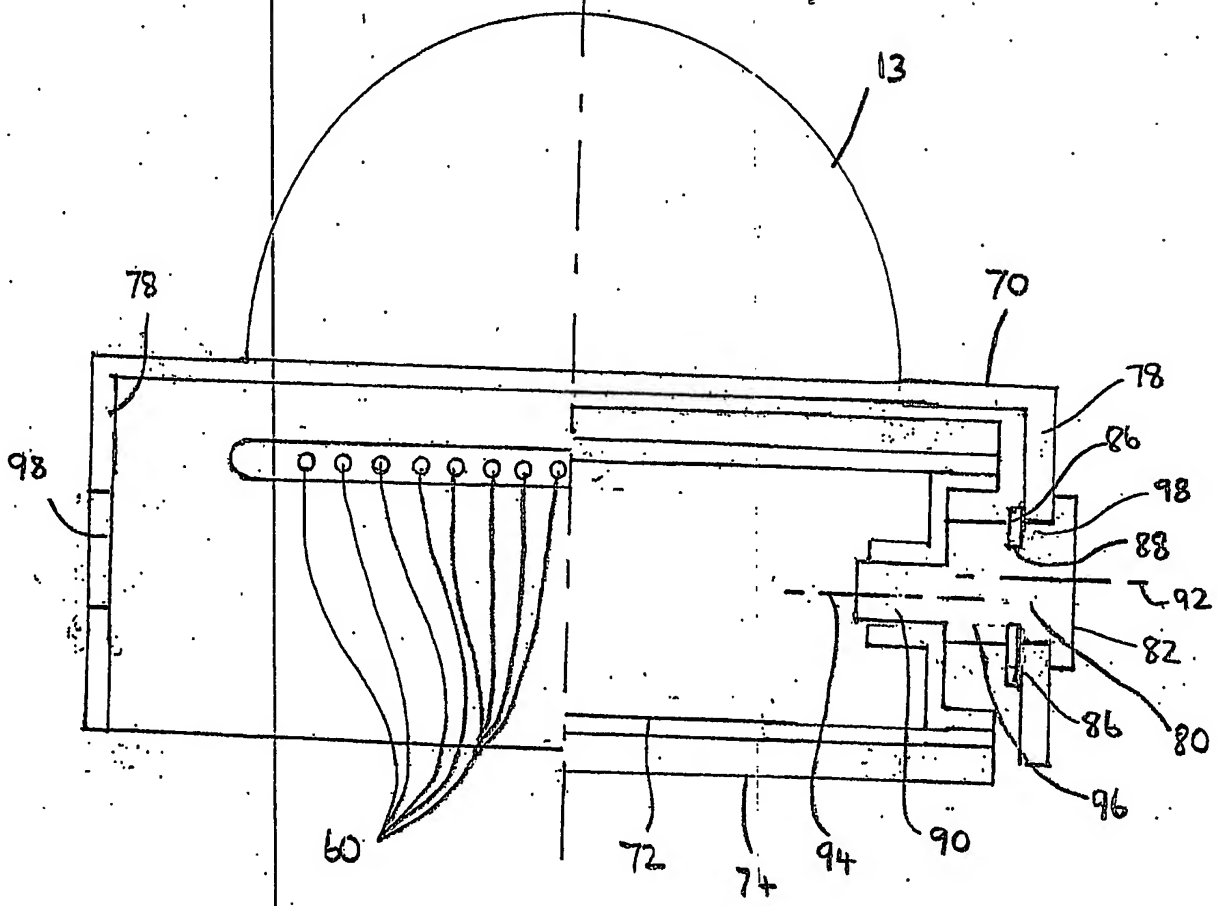
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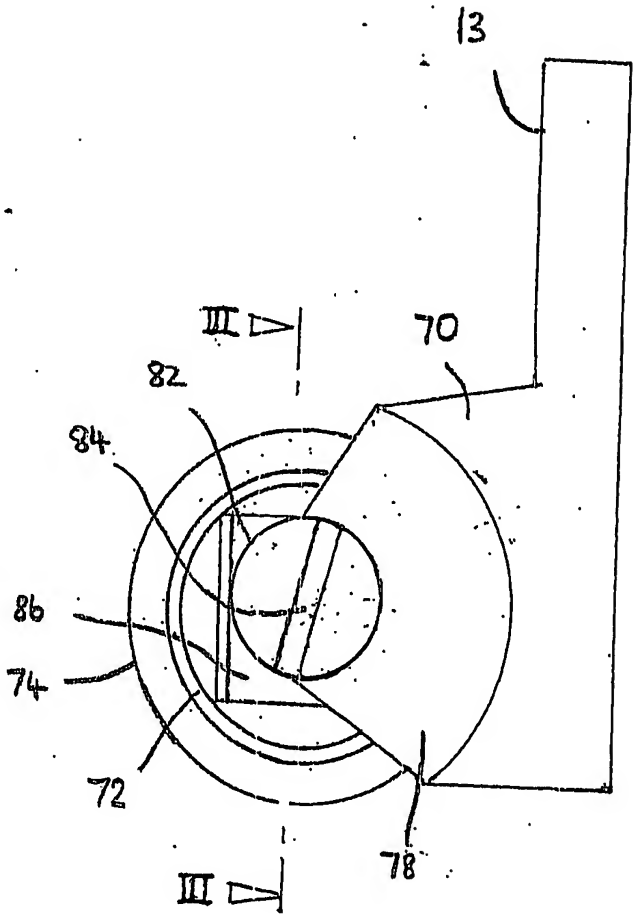
FIG 3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III

FIG 2

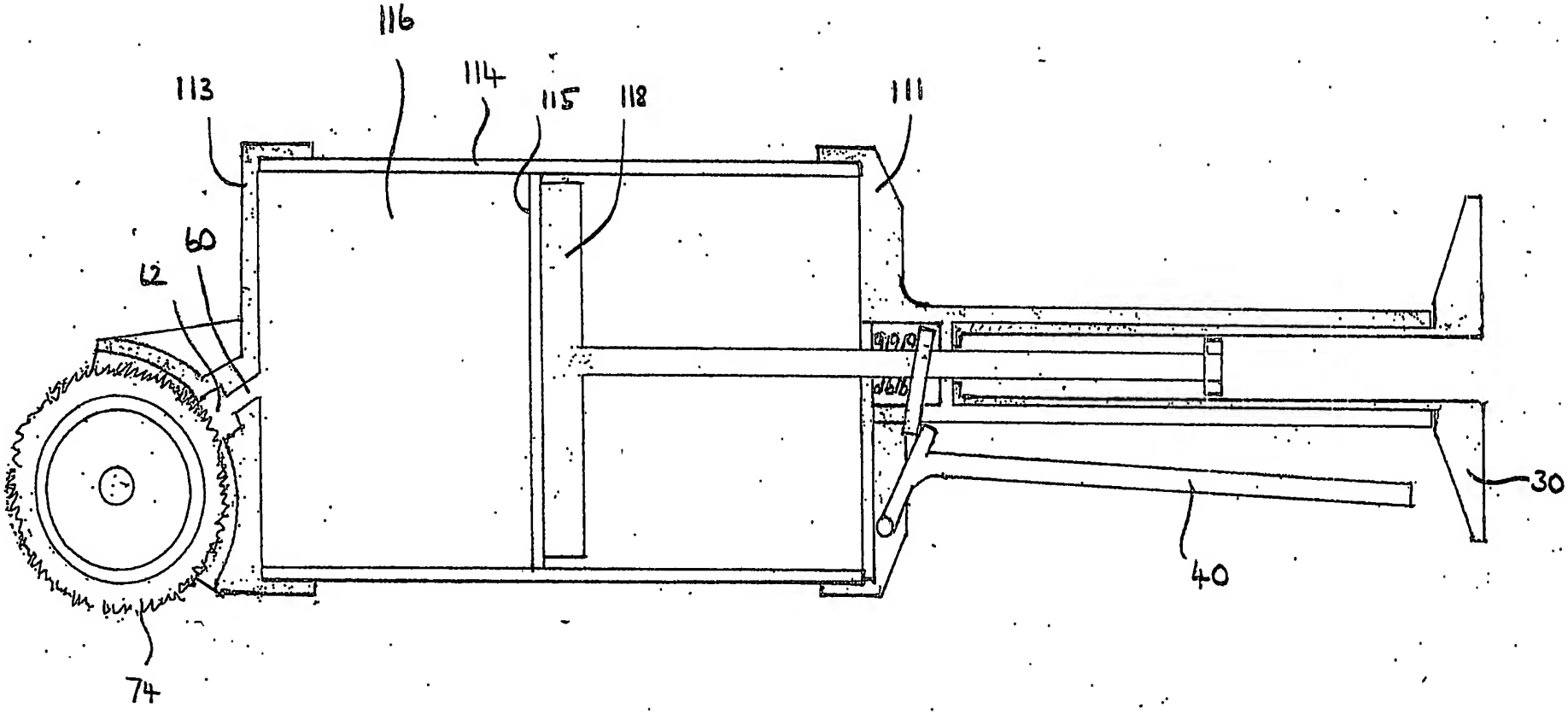

FIG 4

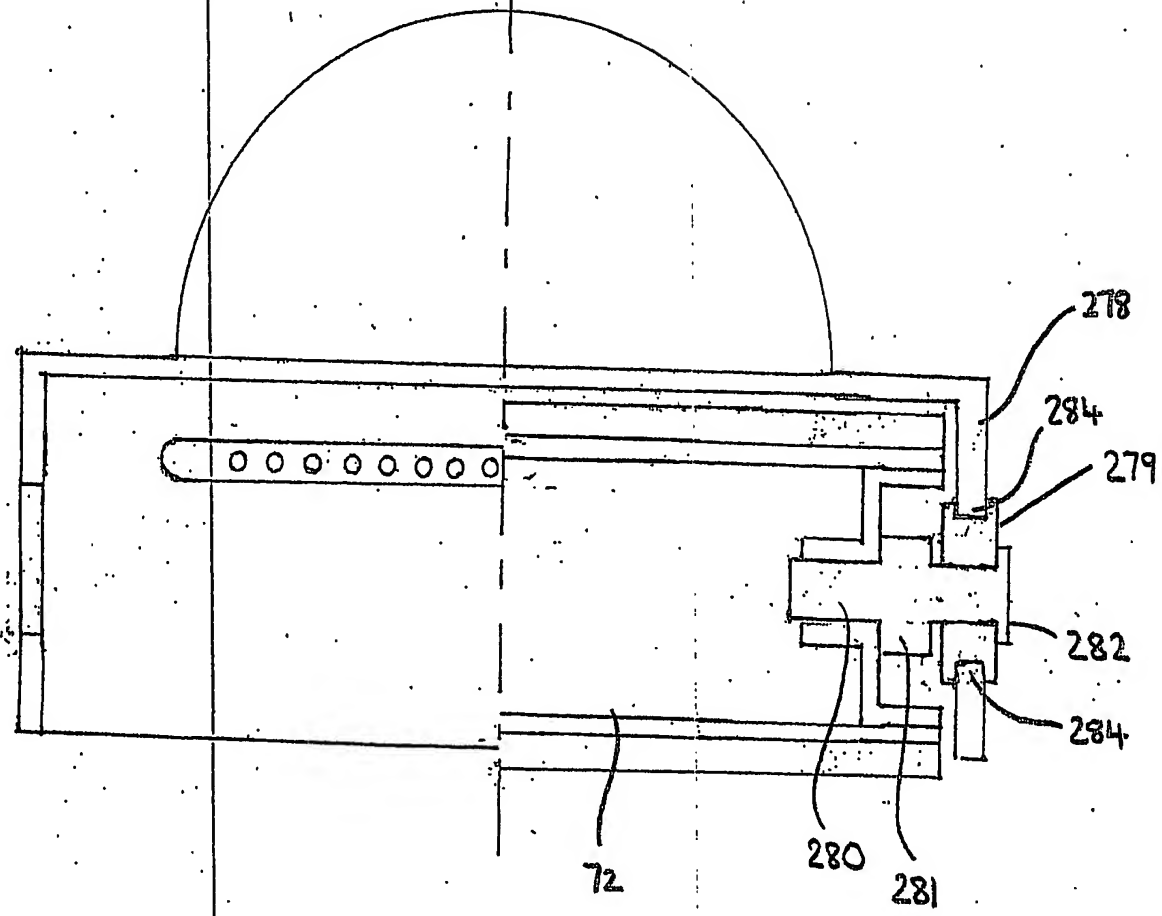

Fig 6

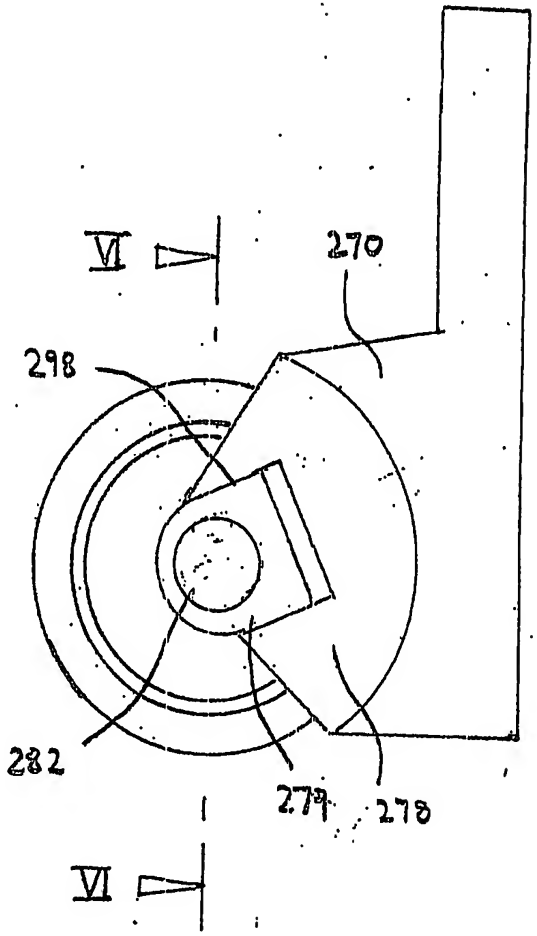

Fig 5

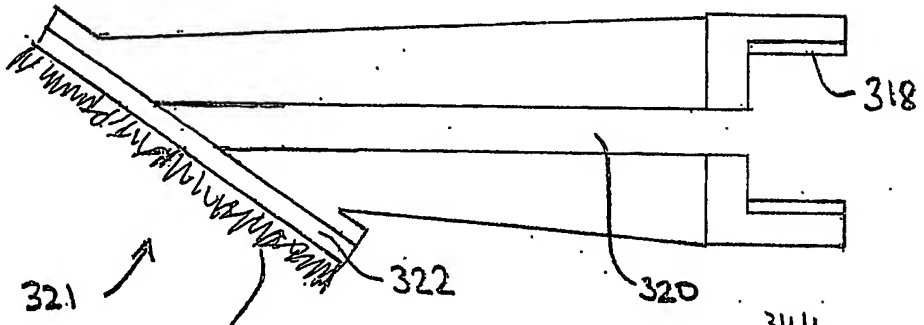

Fig 7a

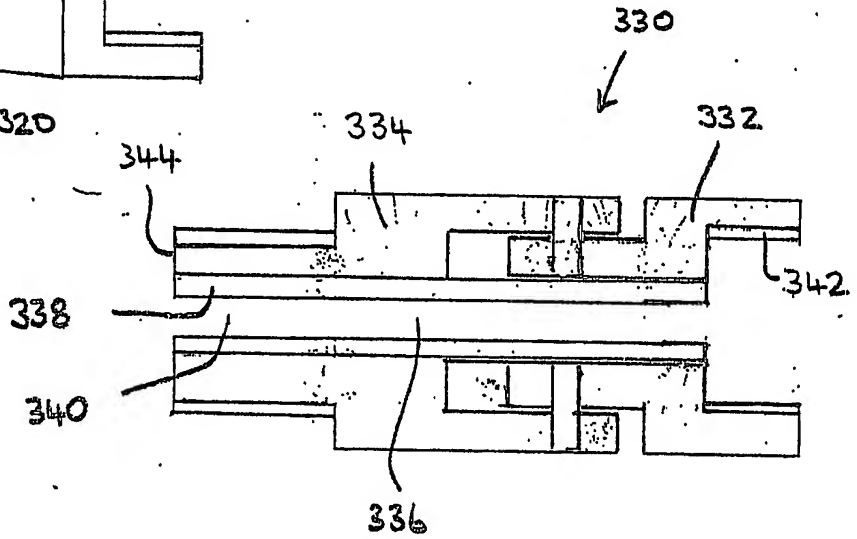

Fig 9

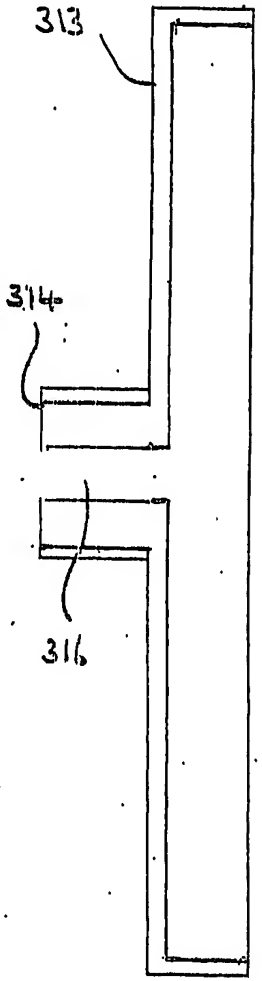

Fig 8

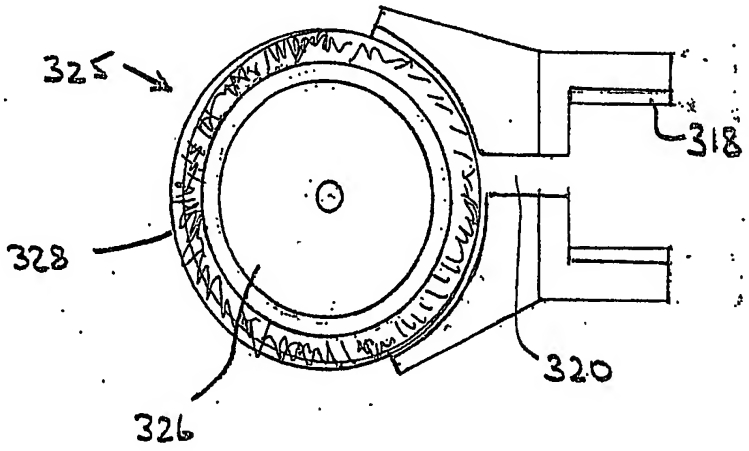

Fig 7b

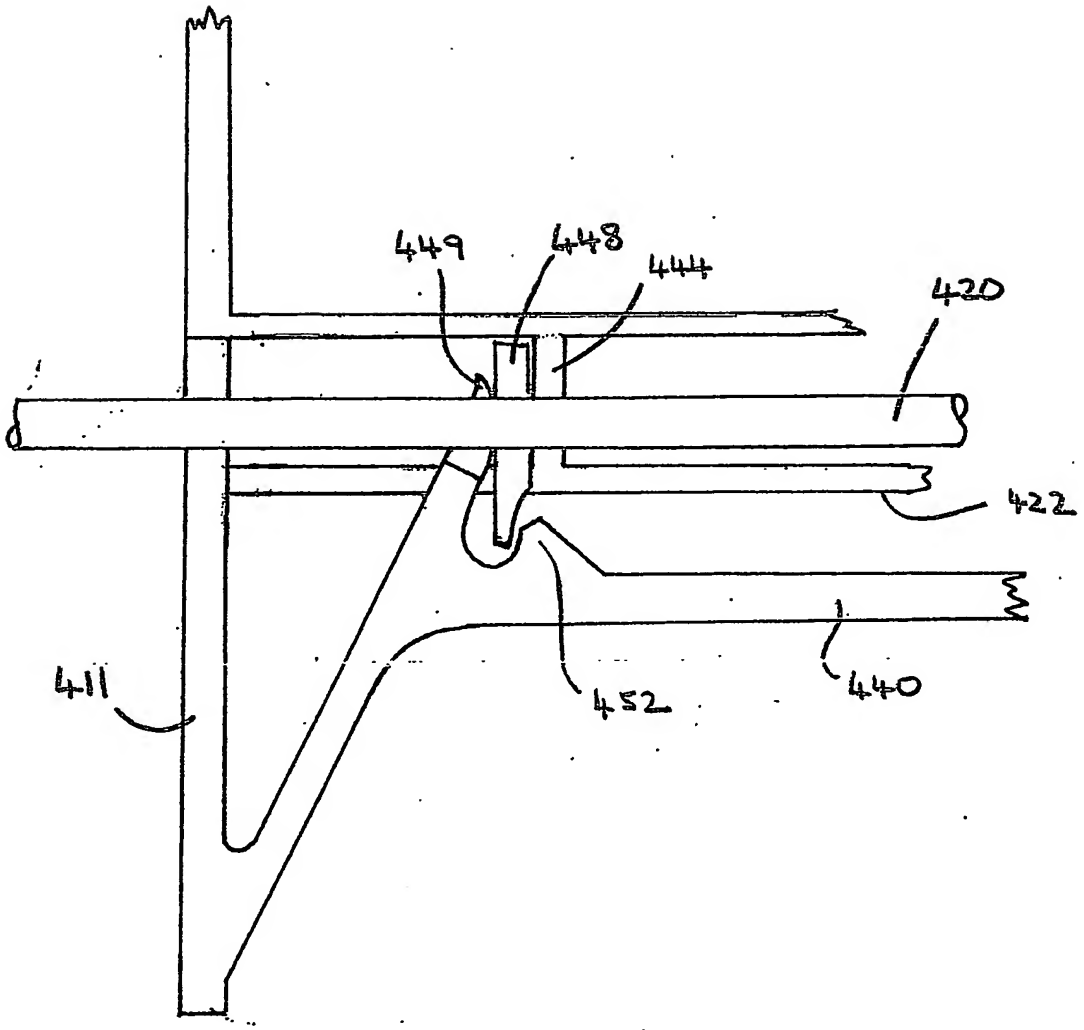

FIG 10

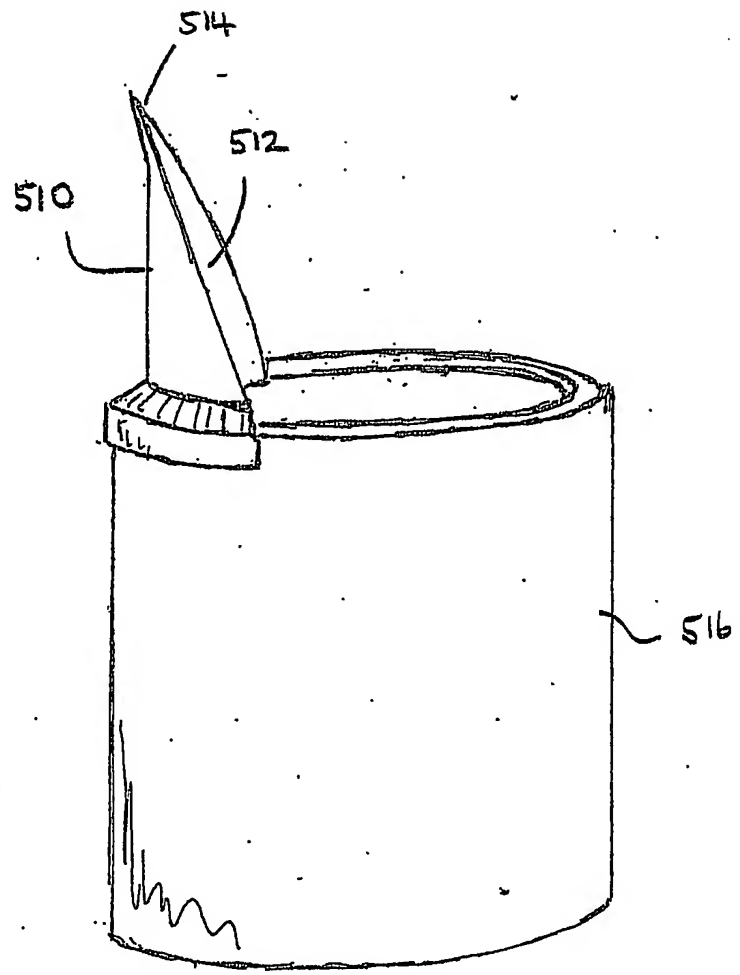

FIG 11

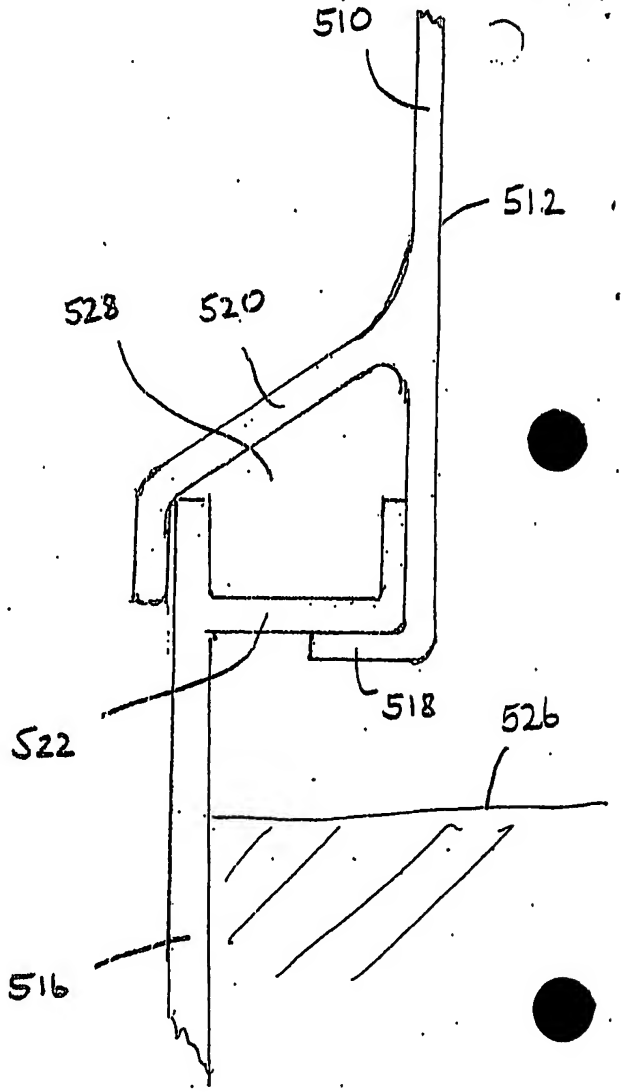

FIG 12

PCT Application
GB0302304

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